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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/320,637	05/26/1999	JOEL STERNHEIMER	3339-239A	5047

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EXAMINER

MARTINELL, JAMES

ART UNIT PAPER NUMBER

1631

DATE MAILED: 01/13/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/320,637

Applicant(s)

STERNHEIMER, JOEL

Examiner

James Martinell

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 21 October 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 13-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 13-18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

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The drawings are objected to because of the reasons listed on PTO-948 attached to paper no. 3 (a copy of that form PTO-948 is attached to this Office action). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

### INFORMATION ON HOW TO EFFECT DRAWING CHANGES

#### 1. Correction of Informalities -- 37 CFR 1.85

New corrected drawings must be filed with the changes incorporated therein. Identifying indicia, if provided, should include the title of the invention, inventor's name, and application number, or docket number (if any) if an application number has not been assigned to the application. If this information is provided, it must be placed on the front of each sheet and centered within the top margin. If corrected drawings are required in a Notice of Allowability (PTOL-37), the new drawings **MUST** be filed within the **THREE MONTH** shortened statutory period set for reply in the "Notice of Allowability." Extensions of time may NOT be obtained under the provisions of 37 CFR 1.136 for filing the corrected drawings after the mailing of a Notice of Allowability. The drawings should be filed as a separate paper with a transmittal letter addressed to the Official Draftsperson.

#### 2. Corrections other than Informalities Noted by Draftsperson on form PTO-948.

All changes to the drawings, other than informalities noted by the Draftsperson, **MUST** be made in the same manner as above except that, normally, a highlighted (preferably red ink) sketch of the changes to be incorporated into the new drawings **MUST** be approved by the examiner before the application will be allowed. No changes will be permitted to be made, other than correction of informalities, unless the examiner has approved the proposed changes.

#### Timing of Corrections

Applicant is required to submit acceptable corrected drawings within the time period set in the Office action. See 37 CFR 1.185(a). Failure to take corrective action within the set (or extended) period will result in **ABANDONMENT** of the application.

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 13-18 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The claims are vague, indefinite, incomplete, and incomprehensible.

- (a) The recitation of "temporal sequence of quantum vibration" (claim 13) is vague and indefinite because there is no definition of the term in the application. This

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part of this rejection is repeated for reasons already of record (*e.g.*, Office action mailed April 16, 2002, page 2, item (b)). Applicant's assertion (paper no. 19, page 5) that "the meaning of said expression is clear from the specification" is unconvincing in the absence of an indication of where the meaning of the expression is made clear.

- (b) The recitation of "minimizing the global harmonic . . . frequencies surrounding said initial frequency" (claim 13) is vague, indefinite, and incomprehensible. This part of this rejection is repeated for reasons already of record (*e.g.*, Office action mailed April 16, 2002, page 3, item (c)). Applicant's description of the phrase in the claim as a circumlocution of the formula on page 10, lines 2-8 is most unconvincing in that page 10, lines 2-8 reads:

The frequency of the musical notes is calculated from the frequencies of amino acids in their free state (proportional to their masses) by minimizing the global harmonic distance  $\sum_{ij} P_i P_j \log \sup (p_i, q_j)$  calculated for all possible pairs of notes,  $(p_i/q_j)$  being the harmonic intervals globally the closest to the corresponding proper frequency ratios. Their respective proportions  $P_i, P_j$  in the envioning population of transfer RNAs are taken into account.

The passage in the specification is no clearer than that in the claim.

- (c) The recitation of transposing the resulting frequencies into the field of audible frequencies" (claim 13) is vague and indefinite because the term is not defined in the application. This part of this rejection is repeated for reasons already of record (*e.g.*, Office action mailed April 16, 2002, page 3, item (f)). Applicant's assertion (paper no. 19, page 5, item (f)) is not convincing. Whether a term "emerges" from the specification is no measure of its clarity to one of skill in the art. Additionally, applicant does not point to where in the application as filed the amended term appears.

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- (d) The recitation of "for inhibition being deduced from the preceding code by symmetrization of the logarithms of the said audible frequencies around their central view" (claim 13) is vague and indefinite. This part of this rejection is repeated for reasons already of record (*e.g.*, Office action mailed April 16, 2002, page 3, item (g)). The amended phrase is no clearer than the one it replaces. Applicant merely points out that this change was made "in view to taken (sic) in account the objection (sic) of the Examiner" (paper no. 19, page 5, item (g)) without explaining how the amended phrase presents a clear meaning.
- (e) The recitation of "central view" (claim 13) is vague and indefinite. This part of this rejection is repeated for reasons already of record (*e.g.*, Office action mailed April 16, 2002, page 3, item (h)). The phrase has no antecedent basis and applicant's assertion at paper no. 19, page 5, item (h) does not indicate antecedent basis for the term.
- (f) The recitation of "the most significant similar series of notes and signatures which result in a melodically and harmonically coherent progression" (claim 13) is vague and indefinite. This part of this rejection is repeated for reasons already of record (*e.g.*, Office action mailed April 16, 2002, page 3, item (i)). The amendment to the claim is no clearer than the original language. Applicant merely asserts that the application at various locations makes the phrase clear (paper no. 19, pages 5-6, item (i)) without explaining how. Additionally, the application does not disclose or teach how to identify "the most significant similar series of notes and signatures which result in a melodically and harmonically coherent progression."

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- (g) The recitation of "musical periods" vague and indefinite because the term is not defined. This part of this rejection is repeated for reasons already of record (*e.g.*, Office action mailed April 16, 2002, page 3, item (j)). Applicant argues (paper no. 19, page 6, item (j)) that Annexes A and B explain scaling waves. Annex A has not been considered because it is in the French language. Annex B is not convincing because no link is seen between the musical periods and the scaling waves. The reference to the website has not been considered because (1) no copy of the material at that website is in the record and (2) no evidence is in the record to indicate what was present in the website as of the effective filing date of the instant application.
- (h) The recitation of "adjusting the phrasing to the measure" (claim 13) is vague and indefinite because the term is not defined. This part of this rejection is repeated for reasons already of record (*e.g.*, Office action mailed April 16, 2002, page 3, item (l)). The amendment to the claim and the argument in paper no. 19, pages 6-7, item (l) are not convincing. The reference to the website has not been considered because (1) no copy of the material at that website is in the record and (2) no evidence is in the record to indicate what was present in the website as of the effective filing date of the instant application. The definition recited in paper no. 19 is not convincing because the term itself is used in own definition and this definition is vague. The passage at page 13, lines 4-6 does not clearly define what is meant by the term.
- (i) The recitation of "using a keyboard featuring a 'one key play' device" (claim 13) is vague and indefinite because it is not understood what is meant by the phrase. This part of this rejection is repeated for reasons

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already of record (*e.g.*, Office action mailed April 16, 2002, page 3, item (m)). The argument in paper no. 19, page 7, item (m) is not convincing. The reference to the website has not been considered because (1) no copy of the material at that website is in the record and (2) no evidence is in the record to indicate what was present in the website as of the effective filing date of the instant application. No copy of the GB 2 091 470 is in the record.

- (j) The recitation of "tone quality" (claim 13) is vague and indefinite because the term is not defined. This part of this rejection is repeated for reasons already of record (*e.g.*, Office action mailed April 16, 2002, page 4, item (n)). The addition of the purportedly synonymous term "timbre" does not clarify the meaning of the claim because "timbre" is vague and indefinite as well in setting the metes and bounds of the claim. Neither the text at page 14 of the specification nor Annex C further defines the terms.
- (k) The recitation of "determining the tone quality . . . the closest timbre in a palette of given ones" (claim 13) is vague and indefinite because the meaning of the passage is not understood. . This part of this rejection is repeated for reasons already of record (*e.g.*, Office action mailed April 16, 2002, page 4, item (o)). Neither the amendment to claim nor Annex C improves the understanding of this part of the claim.
- (l) The recitation of "further stabilizing" (claim 16) is incomplete because there is no antecedent basis for the passage. The amendment of claim 16 does not establish a previous stabilization, hence there is no antecedent basis for "further" stabilizing.

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- (m) The recitation of "grouped quantum vibrations arising from the spatial conformation of the protein . . . denoting the central values" (claim 16) is incomprehensible. This part of this rejection is repeated for reasons already of record (*e.g.*, Office action mailed April 16, 2002, page 5, item (z)). The amendment makes the claim no clearer.
- (n) The recitation of "systematically spotting" (claim 18) is vague and indefinite because it is not explained what is meant by the term. This part and of this rejection and parts (o)-(t) of this rejection are repeated for reasons already of record (*e.g.*, Office action mailed April 16, 2002, pages 5-6, items (cc)-(ii)). Claim 18 has not been cancelled as was intended by applicant (*e.g.*, see paper no. 19, page 4).
- (o) The recitation of "melodic similarities and counter-similarities" (claim 18) is vague and indefinite because the terms are not defined.
- (p) The recitation of "protein sequences that are known and available in databanks" (claim 18) is vague and indefinite and incomplete. The application does not distinguish between known and unknown sequences (and who is to know the sequences). Additionally the phrase amounts to improper incorporation of essential subject matter by reference (see MPEP 608.01(p)).
- (q) The recitation of "their" (claim 18) is incomplete because there are multiple possible antecedents for the term.
- (r) The recitation of "those proteins" (claim 18) is incomplete because there are multiple possible antecedents for the term.
- (s) The recitation of "so as to determine their metabolic agonists and antagonist with those proteins" (claim 18) is vague and indefinite because it is not known what is meant by the phrase.



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- (t) The recitation of "by comparison with acoustic . . . effects have been observed (claim 18) is vague, indefinite, and incomprehensible.
- (u) Claims 14 and 15 are incomplete because they depend from cancelled claim 1.

Claims 13-18 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The recitation of "or timbre by comparing . . . closest timbre in a palette of given ones" is new matter. No basis for this passage is seen at page 14, lines 8-21 as is asserted by applicant in paper no19, page 18. Annex C cannot provide support for the amendment because it is not part of the specification, it has not been incorporated by reference, nor has it been established that it was either extant or published as of the effective filing date of the instant application.

Claims 13-18 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Each of the points mentioned in the rejection hereinabove (items (a) – (t)) is incorporated here. The invention is not described in such a way that one of skill in the art could understand and/or practice the invention. This rejection is repeated for reasons already of record (*e.g.*, Office action mailed April 16, 2002, page 6, second full paragraph). Applicant's arguments (paper no. 19, pages 10-11 are not convincing. No clear connection between the discovery of discrete sizes of nascent polypeptide chains in the article by Varenne et al (J. Mol. Biol. 180: 549 (1984)) and the claimed methods has been established.

Claims 13-18 are rejected under 35 U.S.C. 101 because the disclosed invention is inoperative and therefore lacks utility. This rejection is repeated for reasons already of record (*e.g.*, Office action mailed April 16, 2002 page 6, last full paragraph). Applicant's arguments (paper no. 19, pages 11-12) are not convincing. None of the evidence alluded to by applicant measures protein biosynthesis, but only

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monitors some gross activity (*e.g.*, growth or biomass production of plants as set forth in Annexes F1 and G1 and light production by *Vibrio fischeri* in Annex H).

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

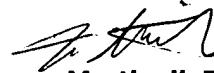
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to James Martinell whose telephone number is (703) 308-0296. The fax phone number for Examiner Martinell's desktop workstation is (703) 746-5162. The examiner works a flexible schedule and can be reached by phone and voice mail. Alternatively, a request for a return telephone call may be e-mailed to [james.martinell@uspto.gov](mailto:james.martinell@uspto.gov). Since e-mail communications may not be secure, it is suggested that information in such requests be limited to name, phone number, and the best time to return the call.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Woodward, can be reached on (703) 305-4028. The fax phone number for the organization where this application or proceeding is assigned is (703) 308-4242.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0196.



**James Martinell, Ph.D.**  
**Primary Examiner**  
**Art Unit 1631**